

Stage IV. (Green form). Head round, flattened, oblique, clypeus half to vertex, mouth projecting, antennae moderate, divergent; green, whitish in the clypeus, antennae white, mouth brownish shaded; width 1.4 mm. Body cylindrical, slightly narrowed before, normal, moderate; segments obscurely 6-annulate. Green, faintly white lined; thoracic feet and a row of segmentary, diffuse, subconfluent ventral spots and base of foot of joint 10 purple brown. The more distinct pale lines are addorsal, subdorsal, a broad slightly yellowish diffuse one on subventral fold and broken adventral. Tubercles whitish green, roundedly elevated, low. Setae short, obscure. (Brown form). Head broadly brown over the lobes, the edges of the patch mottled, brown marks on sutures and in clypeus. Body pale brown, faintly pale lined; a dark brown dorsal line and broken stigmatal one, rather broad; ventral and foot marks as in the green form. Subventral fold broadly pale.

Stage V. (Green form.) Head green, rounded, flatly outstretched, whitish streaked about clypeus, antennae rather long, yellowish white, mouth pale; width 2 mm. Body cylindrical, subventral fold distinct; uniform, not elongate. Green, whitish over the dorsum, with addorsal, subdorsal and double lateral irregular, faint, whitish lines; subventral fold diffusely yellow. Feet green, normal. Tubercles minute; setae rather long but fine, dusky. A brownish shade at the base of the foot of joint 10. (Brown form.) Head with a large chocolate patch on each lobe shading into reticulations at the edge, leaving the clypeus mostly pale. Body milky chocolate, the subventral fold broadly and diffusely yellow; dorsum and venter with several obscure darker lines. On the sides of joints 2 to 4 and 10 to 11 and on joints 5 to 9, forming nearly completely encircling bands are irregular dark chocolate mottlings. Tubercles chocolate, spiracles pale. The bands vary in extent and distinctness. Foot of joint 11 chocolate; anal plate pale brown.

Pupation in the ground.

Food plant. Cottonwood (*Populus fremontii wislizeni*); they will also eat willow. Larvae from Denver, Colorado. Eggs May 11th, mature larva June 7th.

ECONOMIC ENTOMOLOGY.—Sanderson's Insects injurious to staple crops (New York, John Wiley and Sons, 1902) contains fifteen chapters devoted to Injury done staple crops by insect pests. Structure and development of insects, General farm practice against injurious insects, Beneficial insects. Insects injurious to grains and grasses, to wheat, to Indian corn, Weevil in grain, Insects injurious to clover, to cotton, to tobacco, to the potato, to the sugar-beet, to the hop-plant, and Insecticides.

The text though compiled and not comprehensive will serve the purpose of the author fairly well; a direct reference to a detailed account of each species would have been of real benefit. Most of the illustrations have been used previously and the source is acknowledged though in some cases inadequately; the helpfulness of some of the original cuts (e. g. Figs. 4 and 5) may well be questioned.

PROCEEDINGS OF THE CLUB.

8 March, 1901. The 219th meeting was held at 156 Brattle St., Mr. S. H. Scudder in the chair.

Mr. Samuel Henshaw was unanimously elected a life member as a token of the Club's appreciation of his generosity.

Mr. C. W. Woodworth remarked on observations he had made on *Aleurodes citri*, which feeds on the under side of the leaves of orange trees in Florida. He gave an interesting account of its anatomy and habits. Among other things he called attention to the curious arrangement of the stigmata and tracheae, owing to the extreme flatness of the insect. He also stated that all the appendages except the mouth organs are shed in

early larval life, the insect becoming fastened to the leaf by a secretion. The oesophagus keeps up a regular pulsation, reminding one of that of the heart. Wings are developed in the imagoes and they are locally known by the name of "white flies."

Mr. S. H. Scudder stated that he had recently heard from a correspondent in California that cave-crickets are injurious to mushrooms.

Mr. Woodworth spoke of the curious flight of butterflies of the genus *Coenonympha* very abundant in California in the autumn.

12 April, 1901. The 220th meeting was held at 156 Brattle St., Mr. S. H. Scudder in the chair. Mr. A. P. Morse acted as Secretary.

Mr. Scudder read a letter from Mr. G. H.

Johnson of Bradford, N. H., announcing the capture of *Euodia portlandia* at Webster, N. H.; and one from Mr. H. D. Goodale of Suffield, Conn., concerning a malformed *Euvanessa antiopa*, an example having been bred which entirely lacked the right hind wing.

Mr. Scudder announced his recognition in the U. S. orthopteran fauna of the genus *Miogryllus* Sauss., and showed four species from the southern United States.

Prof. C. W. Woodworth exhibited drawings and models illustrating in a striking and ingenious manner the peculiarities in venation and wing-folding of several genera of insects belonging to the Forficulidae, Blattidae and Staphylinidae.

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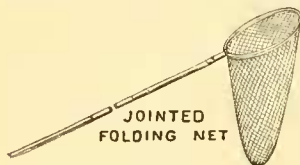
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